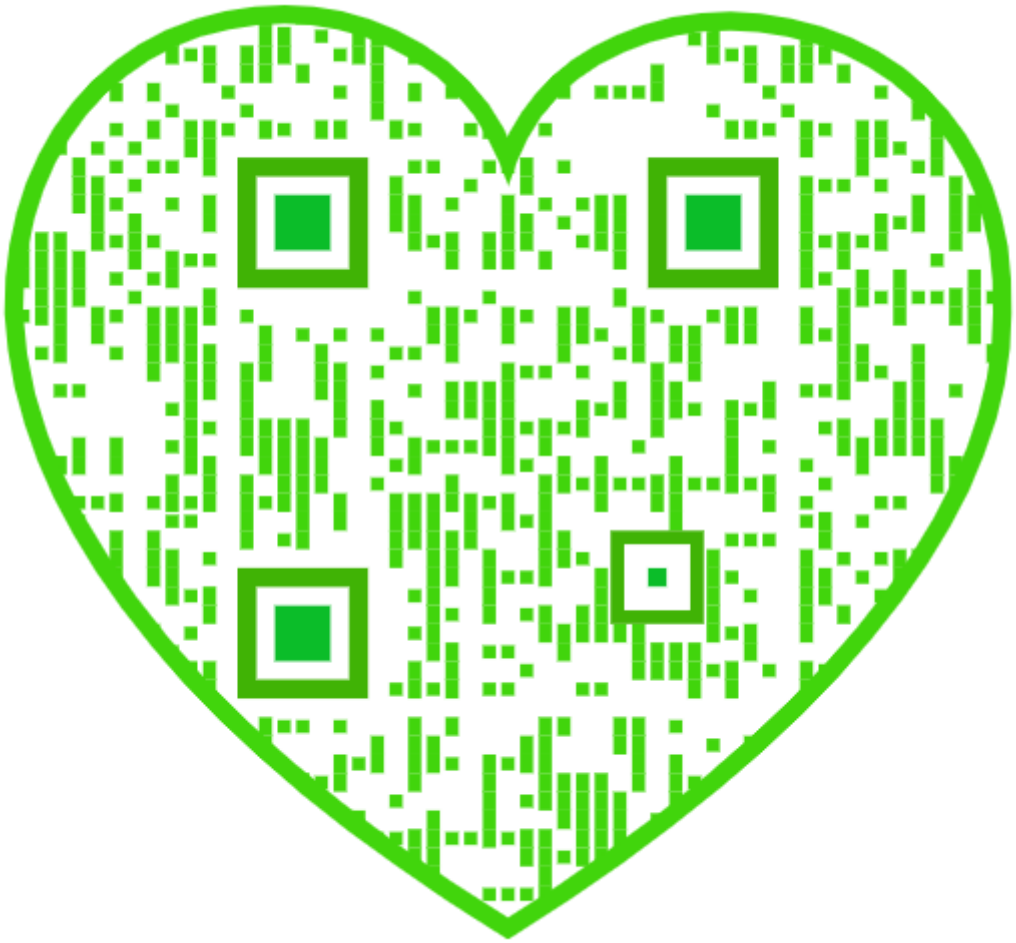

THE

DENTAL MONITOR;

OR,

A PRACTICAL GUIDE

FOR THE REGULATION AND

MANAGEMENT OF THE TEETH,

THROUGHOUT LIFE.

BY

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PREFACE.

THIS little work is intended to convey all the information necessary for the proper management of the teeth, in as few words as possible, and without the use of unprofitable technical expressions.

The practice laid down, will be found as reasonable in theory as it is efficient in practice: and it is hoped that the cautions against empiricism, may not prove altogether unserviceable in preventing that disappointment consequent upon the employment of imposters.

It is difficult to obtain readers for what many persons may think a dry subject,—but when the importance of the organs here considered is remembered, and that for a small outlay a treatise may be obtained, which shall clearly and in a few minutes shew that these organs may not be neglected, and the reason why—as well as point out the means for the prevention and cure of diseases — when, it is repeated, all this is remembered, — the belief is indulged, that it will not rank least amongst the small works of practical utility.

Croydon, Surrey;
October, 1852.

THE DENTAL MONITOR.

I. It is generally admitted, that a handsome set of teeth is the ornament most to be desired for the human countenance —indeed, an otherwise plain face, with the teeth well formed and in good position, will often appear interesting—always pleasing. On the other hand, the expression of a person possessing really good features, with bad teeth, will be rendered in too many instances almost repulsive.

II. The proper mastication of the food is a matter of very great importance:—perfect mastication requires that while the food is ground by the teeth, it should be blended with the saliva, for thus its solution is more easily effected upon reach-

ing the stomach and mixing with the gastric juice. It is evident that if we lose our teeth we masticate imperfectly, and bad digestion follows as a natural consequence. —(Appendix, *Note* i.)

FROM the preceding opening paragraphs, I presume no one will dissent—and that all will agree with me, that if BEAUTY and HEALTH are so dependent upon these organs, it is the duty, first, of the parent to attend with earnest care to their proper developement in the person of the child: and, secondly, of the adult in possession of teeth fully developed, to cautiously preserve them. Let me then, briefly, advise the parent the course to pursue with respect to the child, and furnish the child with a monitor to guide him when he becomes a man.

Every individual in the regular course of nature has two sets of teeth, the germs of which are in existence even previous to the birth of the infant. The first of

these appears in infancy, and continues for a few years only—it is distinguished by the name of TEMPORARY: this set consists of twenty teeth, ten in each jaw; they are named according to their shape or use—*Incisores*, or edged teeth, intended to cut—these are the four front teeth in each jaw.—Next to them, one on either side, come the *Cuspidati* or pointed teeth —their object is to hold and tear—two in each jaw.—Lastly, the *Molares* or grinders, of which there are four in each jaw.

When the child has attained the age of two years the first set of teeth is generally completed—but as it is not in my present purpose to enter into the *minutiæ* of temporary dentition, I proceed to the period of their shedding and replacement by the permanent set.—This is an epoch often so little thought of in respect to *future consequences*, that it is not until the time for remedial care has gone by, that the discovery of deformity is made; yet this

period of second dentition will often determine, according to its being watched over or neglected, future beauty or deformity, health or disease.

About the seventh year usually commences the shedding of the first teeth, and it is now that the aid of the dentist becomes peculiary valuable; sometimes from the too tardy falling of the temporary teeth, a permanent tooth will prematurely shoot out, taking up a false position, and this will not unfrequently be the case before any sign of caries or looseness from absorption is observable in the first teeth; here the remedy of ignorance has been to remove the intruder, leaving the handsome well-shaped milk tooth remaining — not considering that a very short time will, in the regular order of nature, throw off the whole of the milk teeth, and that a contraction of the jaw will take place proportionate to the loss of the permanent tooth. A little care and judgement on the part of

the dentist will overcome, without such disfigurement, this and almost every other difficulty incident to this period, if he be competent and allowed to use his discretion.

The PERMANENT TEETH are thirty-two in number, beginning to enumerate them from the space between the central front teeth; they stand thus:—first, the central incisores, (one on each side of the space): second, the lateral incisores: third, the cuspidati: fourth and fifth, the first and second bicuspides, or small double teeth: sixth and seventh, the first and second molares, or grinders: and eighth, the third molares, or dentes sapientiæ, commonly called wisdom teeth. The rise of these teeth from the gums, we call *second dentition.*

The symptoms of the appearance of the second teeth, are visible as the child progresses through the seventh year; the first indication of this change is the appearance of the first permanent molares posterior, to

the last temporary grinders; soon after their rise, the two temporary central incisores of the lower jaw become loose, and the permanent ones are ready to succeed them. There is much diversity of opinion as to the proper course to be at this time pursued,—some have urged the immediate extraction of the four front teeth; others, the advisability of allowing them to fall out of themselves. Although impossible to lay down a positive rule for guidance, (two cases being seldom alike), yet I am of opinion that it is, generally speaking, now time to remove the *four* teeth,—the looseness of the two central temporary teeth, is a certain sign that the two permanent central ones are upon the rise, and as they will almost always occupy a greater space than their predecessors, and the natural expansion of the jaw at this time is not often great enough to make up the room required, the extraction of the two teeth will be insufficient to allow of their

taking a proper position. The practitioner, however, must be guided by the efforts of nature, observable in each case, for of two evils premature extraction is far greater than a little too much delay. A similar process now takes place in the upper jaw, the two central incisores becoming loose; here again, in many cases, the safest way is to extract the four temporary incisores. A few months after the central permanent incisores have taken their proper places, it becomes of the utmost importance to attend to the forthcoming lateral incisores of the lower jaw, and shortly afterwards — sometimes simultaneously— the upper corresponding teeth appear; to allow them to take their natural positions, we remove the two temporary cuspidati in each jaw, when the child, as far as the four permanent front teeth in each jaw are concerned, may be considered beyond the reach of danger. The result of the past care will now be seen in the

most pleasing and palpable form; the teeth will appear beautiful in their regularity, whilst the mouth will gradually mould itself into harmony. Twelve of the first teeth, six in each jaw, are now removed, and eight of the second set, four in each jaw, have taken their places. Eight temporary grinders yet remain,—these will not fall in a child of good health for a year or so; it will, however, be occasionally necessary to examine the mouth during this time, lest premature absorption should take place, and afford the new teeth an opportunity of protruding themselves into a false position. About the end of the year the first grinders become loose—this generally commences in the lower jaw; upon their removal the bicuspides, or small double teeth, make their appearance: the upper teeth follow the same course.

The permanent cuspidati, commonly called eye teeth,* will now produce a ful-

(* See Appendix, *Note* ii.)

ness of the jaws, between the lateral teeth and the recent bicuspides; at this time the posterior temporary grinders should be taken out, as they occupy a much larger space in the circle than the second permanent bicuspides, which are to take their places; their removal will give room for the proper developement of the cuspidati, which is of the greatest importance, for they form the most essential feature of expression to the countenance.

It often occurs as the cuspidati advance, that the circle in which the teeth stand becomes so contracted, that without considerable attention deformity will yet take place,—room must be made for them at any sacrifice; but there are no longer any *temporary* teeth to remove. Not unfrequently we find the first permanent molares decayed—this is especially the case in children of delicate constitution. Here then, at once, nature points out the means of relief,—the extraction of these teeth will

generally do all that is required, but when no caries is perceptible, it *may* be advisable to remove two bicuspides; this should not, however, be done *without serious consideration*, and if possible, not at all; and indeed, in most cases, by taking advantage of the valuable assistance of modern anatomical mechanism, we are enabled to avoid it. Of course, these proceedings will be altogether unnecessary where the expansion of the jaw allows the full developement of the teeth, and we shall soon perceive the cuspidati take their natural places of themselves. There are yet eight molar teeth to follow,—four of these will appear between the age of twelve-and-a-half and fourteen; the remainder, the dentes sapientiæ, or wisdom teeth, may not shew themselves until twenty-one or even a later period.—(Appendix, *Note* iii.)

I have now laid down some general rules which should be observed during the period of second dentition, and if judici-

ously observed, they will result in the formation of a good set of teeth, unless indeed, there should happen to be a natural malformation of the teeth, or of the jaw, altogether beyond the control of the dentist.

But if you have a child who from previous neglect or other causes, has his second set of teeth irregularly developed, I advise you, by all means, to lose no time, but take him to a dentist, as the various mechanical contrivances for the correction of deformities, now in use, are applied with great success to the age of fifteen, and even upwards, although success is not so positively certain, after that age as before it.

I would urge the daily use of the brush to children's teeth, with the occasional aid of powder—a habit of cleanliness and attention will thus *be established,* to their great comfort and advantage in after life.

After considerable trouble, we succeed in assisting to produce a good set of teeth,

and now it becomes the duty of the person possessing them, to do all in his power for their preservation. Care and attention will do great things towards preserving them through life,—even *with* care and attention casualties do, and will occur; yet, by their exercise, these casualties are delayed, and not unfrequently greatly lessened.

The cautious and careful possessor of a good set of teeth, should every morning with a brush cleanse the teeth, using powder, and upon retring at night again brush them, when powder will not be necessary; the water used should be tepid. Pains should be taken in the selection of the brush, it ought not to consist of more than three rows of bristles, of a moderate hardness, the knots not being too close together; this brush will allow of free play from its narrowness, and possess a degree of elasticity permitting the bristles to spring into and cleanse the interstices. The proper

way of using the brush is to move it up and down, giving it a slight rotary motion, and not across the teeth from side to side, as generally applied; unless this is attended to, the interstices will not be freed from lodgment, neither will much good be done in any way.

Many persons have a notion that tooth powder is unnecessary—this is a very mistaken idea, for, an acetic accumulation is constantly generating upon the teeth: * a powder, therefore, whose principal ingredient is prepared chalk, will neutralize all acidity, and prove most useful in assisting to remove this pernicious deposit. The following is an excellent recipe for tooth powder: —

3 oz. Prepared Chalk
1½ „ Cuttle Fish
1 „ Orris Root
¾ „ Powdered Myrrh
10 grs. Quinine.—(Appendix, *Note* iv.)

* This deposit is removed in front of the teeth in the day, by the action of the lips, &c., but it accumulates thickly during the hours of rest, and it

This dentrifice may be coloured, (if preferred), with rose pink, and scented with any one of the essential oils. The periodical cleansing of the teeth is also the best guard against the accumulation of that offensive incrustation, called tartar.

TARTAR, if suffered to accumulate, will gradually loosen the teeth, by forcing itself between their fangs and sockets, and finally eject them. It is otherwise highly injurious; indeed, the number of teeth sacrificed to its baneful influences is almost incredible, and it would be useless attempting to begin cleaning the teeth where it exists—for SCALING becomes indispensably necessary; the tartar is of the hardness of stone, yet, from the peculiar adaption of the instruments for its removal, the operation, when skilfully performed, is unattended with pain;—many people deprive themselves of the comfort

is for this reason, that I prefer using powder to the teeth in the *morning*.

that this operation is calculated to afford, from ignorance of the fact of its being painless, and incur the hazard of prematurely loosing nearly all their teeth.—Once removed, the daily ablutions and brush will be attended with the best results, and its re-accumulation, if not wholly prevented, will be much retarded.

DISEASE IN THE TEETH.

THERE are few people who do not know something of the tooth-ache—this distressing malady may too often be traced to a neglect—if not of cleanliness—of having the teeth from time to time examined by a proper person. Many are deterred seeking the inspection of the dentist, from a superfluous sense of causing him trouble, unless they are sure that their teeth actually require something done to them; this is to be deplored, as

his eye will often detect a flaw which may now be treated with ease, and probably save a tooth, the first intimation of whose carious state, would otherwise have been a violent tooth-ache, rendering, it may be, extraction necessary,—although this last operation should in all cases be the last resource. But at any rate, the earlier disease is discovered the easier it is to overcome, and carious teeth are always stopped with greater success before the disease has penetrated to the nerve, than afterwards. Tooth-ache, however, is not always caused by decay and consequent exposure of the nerve; it is not infrequently the effect of inflammation of the periosteum*—when this is is the case, perhaps the best way to get rid of the pain, may be, to get rid of the tooth,† although some-

* The periosteum is a membrane forming a lining for the bones of the body, including the sockets and the fangs of the teeth.

(† See Appendix, *Note* v.)

times the pain can be allayed, or at least, assuaged, (especially when in an incipient state). The cure of the tooth-ache should be undertaken on the principles of the cure of other inflammations—by local and general remedies, varying with the different stages * of the malady.

In the *incipient stage*, cold application will often give relief; topical bleeding will also be beneficial—the lancet if dexterously applied, being more efficient to this purpose than leeches. Where there is an *effusion of lymph*, which is known by a slight swelling and thickening of the surrounding parts, cold application would augment the pain, and recourse should be had to gently stimulating embrocations, such as the camphorated soap liniment—it should be rubbed with a *light hand* over

* A remedy for the tooth-ache is proposed by a friend.—It is tried, but without beneficial effect. Why? Because the inflammation is in a *different stage* in the two cases—although neither of the parties are sufficiently acquainted with the disease to understand the distinction.

the face; care must be taken not to break the skin.

In the *suppurative stage* other remedies are necessary; warm fomentations will generally be found to relieve the distended vessels, and to accelerate the completion of the formation of the abscess. Directly this takes place, an opening should be made by the lancet to allow the escape of the secreted fluid. If this is neglected fresh matter will be continually deposited, the sack containing it will go on increasing in size, the alveolar process will become absorbed, and the pus will open a passage for itself, probably after having occasioned mischief irreparable.

But in that species of tooth-ache, produced solely by the exposure of the nerve and minute blood-vessels which occupy the space in the centre of a tooth*—a stimulating tincture may be gently introduced on a little wool into the cavity, and

(* See Appendix, *Note* vi.)

this may be renewed until relief is obtained. Nothing is better for this purpose than the camphorated spirit, which may be almost everywhere obtained without difficulty. The piece of wool should be small, so as not to need pressure for its introduction, as the effusion of the liquid would excite considerable inflammation of the adjacent gum.

As to the *cause* of tooth-ache, the compass of a short treatise is too small to treat of the subject in any but a general way—In fact there are various causes tending to produce it—sometimes the disease is latent and liable to break out at any time; this is the case, perhaps in nine cases out of ten where the suffering party has been during childhood subjected to the influence of mercury — but the exciting cause of disease may frequently be attributed to the cracking of nuts with the teeth, and making use of them to break a thread, &c.; as also, to submitting them

to sudden changes of temperature—with other improper actions, which will readily suggest themselves.

The apparent density and strength of the teeth, seem to warrant the conclusion of their power to withstand danger from these injurious habits, to which young persons are peculiarly addicted; but this is an error founded on ignorance, for, in addition to the danger of breaking them, it will be seen from the following description of the

STRUCTURE OF THE TEETH,

that these organs must be more frail than they are generally believed to be.

Unlike the other bones of the human structure, the teeth are formed from, and upon, a pulp, which gives its shape to the future tooth—the pulp, which of itself has no roots until the crown of the tooth is formed, throws off ossific matter, layer upon layer—the crown of the tooth being

first formed when it becomes elongated enough to complete its appointments.

It is usual, and convenient, in considering the structure of the teeth, to divide each organ into three parts,—the *crown* or *body*, which is the whole part seen above the gums when in a healthy condition,—the *neck* is the line round the tooth at the termination of the enamel, and to which the gum should adhere—and the *root*, is the portion inserted in the socket in the alveolar process of the jaw.

The whole tooth includes two distinct substances, — a bony substance and an enamel.

The bony substance does not very materially differ from the other bones of the frame, being chiefly composed of gelatine and phosphate of lime—an earthy neutral salt. The chief difference between common bone and the teeth is not in their constituent ingredients, but in the proportions of them, the latter containing

a larger proportion of the phosphate of lime.

The enamel has no gelatine, and is extremely brittle, from its super-abundant quantity of phosphate and carbonate of lime—it is also very hard.

The tooth is endued with sensation by the nerve—which is the expansion of very fine nervous filaments, entered through the extremity of the root. These fine nervous filaments have one common origin; all springing from the larger nerve contained in its channel in the substance of the bone. Traced farther back, these larger nerves of both lower and upper rows of teeth, unite and arise from a common source.—We have here an explanation of what is termed sympathetic pain—Tooth-ache is not unfrequently referred to a healthy tooth, while the credit is really due to a diseased organ situated in a different part of the mouth.

But the tooth is penetrated with blood

vessels for the purpose of nutrition and growth—thus through the minute opening which exists at the end of the root, there pass a nerve as well as a vein and an artery, by which the vital fluid is passed into, and out of, the tooth at each contraction of the heart.

So small is the opening at the end of the root, that it is difficult to trace it at all. Yet by a wonderful contrivance, through it passes the blood in two contrary directions, (being carried by the artery into the substance of the tooth and returned by the vein), and this without interfering with a nerve, (entering the same channel), and of the utmost delicacy and sensibility.

I hope enough has been said to make it evident, that the pressure consequent upon using the teeth as forceps, is very improper, and that it is highly necessary to observe the avoiding of sudden and great changes in temperature. The very body of the tooth—to all appearance so solid—

is penetrated by numberless little vessels, which become greatly distended on any sudden elevation of temperature. This taking place in such a substance as bone, where there is no chance of yielding or swelling, determines in the death or mortification of the tooth.

And now, to those really in earnest in wishing to preserve their teeth, I would say,—Remember, that it is not only attention to them locally that is required, (although, as has been shewn, this is indispensable), but you must be solicitous respecting the state of your *general health.*

Health and beauty are preserved by a good set of working teeth, and a good set of working teeth are retained by health, and to these we are indebted for many of our greatest blessings—blessings often secured to us mainly by a *well regulated course of life.*

But if from previous neglect, illness, or what not, you *lose* a tooth, two teeth, or

even all of them—consult a dentist—not (of necessity) the first one you may happen to hear of, but find out a *respectable* man; he will no doubt replace every deficiency, in order that the food passing into your stomach may be properly masticated; so that digestion will be facilitated, and the functions of nature go on with precision and regularity.

ARTIFICIAL TEETH.

THE very general use of artificial teeth in the present day, is a sufficient proof of the comfort they afford, and it would be here superfluous to enter at length into an explanation of their value.—Suffice it to say, that by the recent improvements in their construction, they are so adapted, as to restore any lost depth and fulness of countenance, and to allow that *most necessary process, mastication,* to be performed efficiently and with ease.

The materials used in the construction of artificial teeth, are various.—In one case, gold is used as a base,—mineral teeth* being mounted upon it. — In another, the same base with natural teeth instead of mineral.—Another case may require a base of ivory, forming the sockets, for either natural or mineral teeth. But the practitioner is guided by the circumstances of each particular case. For instance—a person loses his teeth, but it so happens that there is no very great absorption, and the mere restoration of the teeth is sufficient to produce the original contour of countenance,—here, gold, with natural or mineral teeth, should be employed. But another person loses his teeth and a very *great* absorption takes

* *Mineral teeth* are composed of a combination of the china paste with some silicious substances, rendering them exceedingly hard; they are covered with an enamel admitting every variety of shade, and perfectly resembling the natural organs—they undergo no change in colour or decomposition; but are liable to fracture, especially if of inferior quality.

place, so much so, as to require considerable substance to restore natural expression, —here, ivory,* with either the teeth carved, or (if formed of mineral or natural teeth) let into it, should be used. The defects remedied by this valuable material, (ivory) are no less pleasing than surprising, and from its lightness, it should be employed in almost all cases where bulk is required. It may also be said to be the best material for the organization of *artificial palate.* As before observed, the dentist must use his discretion in the selection of material —thus he will proceed with certainty, giving satisfaction to his patient, and with gratification to himself.

After all, more depends upon the selection of a dentist than any thing else— select a man who professes to do extraordinary things and to stand alone in

* Ivory used for dental purposes, is that, either of the hippopotamus or walrus, and is the hardest and whitest procurable.

ability; you will be dissatisfied with his performance. Or, be allured by some of the disgraceful advertisements so numerous in these days, and you will assuredly be disappointed.—These empirics, while they pretend to superior skill, and to practise it upon singularly moderate remuneration, not only prove themselves wholly incapable in the capacity of dentists, but actually extort often considerably more by way of remuneration, than an honourable man whose only pretence is a simple knowledge of his business; and as he does not pretend to render his professional assistance except upon fair remuneration, so you may rest assured that it will not exceed that which is right. But by employing the charlatan, not only does the patient suffer; the respectable dentist is deprived of that support due to him—whilst after the dishonesty of the one is found out, the other is too often included in the indignant expressions of the

injured party, stigmatizing DENTISTS in a body—so that his injuries are twofold; and all this may be avoided, by either a few enquiries as to the respectability of the dentist, or attending to the recommendation of a friend who has himself received satisfaction, as well as by other very simple means.

Before concluding, I may suggest the prudence of having the teeth restored *as they are lost;* by so doing, the harmony of expression is retained, and the teeth adjoining are kept in their proper positions.

Artificial teeth are adapted without the extraction of firm and healthy stumps, nor need the most timid fear the smallest inconvenience or pain during the process of their formation, and when completed, will without doubt experience their utility and comfort. They should however, always be so constructed as to be removable easily at pleasure, when they may be brushed with camphorated chalk, which

will thoroughly cleanse them. Although this need not be done more than about once a week, some persons prefer removing them every night; but of course, this is regulated according to the will of the wearer.

APPENDIX.

(Note i.) THE clearest evidence of the evil, that must arise from the non-comminution of the food before passing into the stomach, is furnished by that very rare opportunity which occurred to Doctor Beaumont in the case of Alexis St. Martin, who received a musket-shot, which removed a portion of the stomach in such a manner as to allow an investigation of the process of digestion — considerable attention was paid to the subject, and it was found that to produce good chyme, (the condition to which the nutriment is reduced in the stomach), the food must be introduced in a well-divided and macerated state. The gastric juice was observed to produce changes first upon the *surface* of a particle of food, then by a muscular action the chyme thus formed was removed and the *under-surface* exposed, which after having been acted upon was again, in its turn,

removed. The energy of the digestive functions loses power after each action, and after a certain time the aliment passes forward—if the aliment is well divided, *perfectly* digested, as the gastric juice has had many surfaces under its influence at once—if not well divided, *imperfectly* digested, the gastric juice having had under its influence but so many large lumps.

(Note ii.) The supposed connexion existing between these teeth and the eye, is a vulgar error—for the cuspidati have no more to do with the eyes than any other of the teeth.

(Note iii.) The wisdom teeth often occasion a good deal of inconvenience in their *rise*.—The lancet will often give relief—but, if it fails to do so, and a violent and long continued pain is felt all along the side of the face, the file should be carefully employed, to diminish the pressure causing the pain.—*(see some excellent observations on this subject recently contributed to "The Medical Times and Gazette," by Mr. Bate, of Swansea.)*

(Note iv.) The recipe for tooth powder given in the text, is valuable, inasmuch as it will make the teeth as white as they ought to be without doing any harm. "Many of the tooth powders which are offered for sale with the promise of rendering the teeth beautifully white, perform for a time all that is promised, at the expense of permanent and irremediable injury to the teeth, for they often contain a quantity of tartaric or other acid, which effects a gradual decomposition of the enamel."—*Bell's Lectures on the Teeth.*

(Note v.) The operation of *Extraction* is about the only one the dentist has to perform, causing pain. —Lately, one or two dentists in London have advertised their ability to remove teeth without any pain, and without the use of chloroform or other drug; but I have no hesitation in saying, that the thing is—humanly speaking — *impossible*. But *if* any man discovers a method for so performing the operation, I consider him morally bound to disclose it; — he will thus secure the gratitude of the thousands on whom he confers the inestimable boon. The lately resigned Editor of "The Medical Times and Gazette," —a man of great honour and ability—confirms my opinion. — *(See his communication in reply to my inquiries, respecting his opinion of the matter, published in "The Medical Times and Gazette" of September 18th, 1852.)*

(Note vi.) This species of tooth-ache is now to be cured almost instantaneously, by a newly discovered preparation; and when it has allayed the pain, the tooth may be permanently stopped. But the preparation is not easily obtainable, and should only be applied by a professional man.

FINIS.

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